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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,062	01/19/2001	Takeshi Misawa	0905-0255P-SP	6672

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EXAMINER	
MISLEH, JUSTIN P	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/764,062	MISAWA, TAKESHI	
	Examiner	Art Unit	
	Justin P. Misleh	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 2, 5, 8, and 10 - 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 5, 8, and 10 - 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Book Excerpt*.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed November 21, 2005 have been fully considered but they are not persuasive.

2. Applicant initially argues, "If the Examiner is to again assert that the focal length relates to the 'structure of lens,' competent evidence must be provided."

The Examiner maintains, as recited in the Office Action (see page 3; mailed August 25, 2005), "The 'focal length' of a lens is determined by the index of refraction, the radii of curvature of the lens' surfaces, and the medium in which the lens resides; hence, the 'focal length' corresponds to the 'structure of lenses.'"

Evidence for such a conclusion can be found in *Introduction to Modern Optics, Second Edition, Dover Publications, Inc., pp. 296 and 297* (attached). On page 296, Equation 10.8 clearly shows how the focal length f is determined by the index of refraction n of the medium or material in which the lens resides and the radii of curvature of the lens' surface r. Therefore, the focal length indeed corresponds to the structure of lenses.

3. Applicant additionally argues, "It appears what has been done, is that the Office Action has focused on the substitution in difference instead of on the invention as a whole."

Applicant has not provided any evidence supporting the above allegation. Applicant's arguments are not evidence of non-obviousness. See MPEP § 716.01(c) [R-2].

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1 – 3, 5, 8, and 10 – 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya et al. in view of Sekine.

The Examiner's above-stated response is fully incorporated into these rejections.

6. For **Claims 1 and 3**, Komiya et al. disclose, as shown in figures 3A and 3B and as stated in column 5 (line 15) – 6 (line 24), an image sensing unit (CCD 17), a first recording controller (card writer 22) for recording image data which is output from the image sensing unit on a recording medium (memory card 23), and a second recording controller (also card writer 23) for recording data which represents characteristics based on the structure of lenses of the image sensing unit (Specifically, see column 5, lines 54 – 67, and column 6, lines 43 – 48).

Komiya et al. disclose writing lens characteristic data in a header portion of image data in the memory card (23). In other words, lens characteristic data and corresponding image data are corresponding recorded in the recording medium. Furthermore, Komiya et al. teach that the lens characteristics may comprise "lens position" and "focal length", which are later used for image processing including correction of lens aberrations (see column 6, lines 13 – 23). The "focal length" of a lens is determined by the index of refraction, the radii of curvature of the lens' surfaces, and the medium in which the lens resides; hence, the "focal length" corresponds to the "structure of lenses".

However, Komiya et al. fails to teach wherein the image sensing unit includes a honeycomb type solid-state electronic image sensor having a number of photoelectric transducers disposed in column and row directions wherein the photoelectric transducers for odd-numbered columns are placed in odd or even numbered rows and the photoelectric transducers for even-numbered columns are placed in even or odd numbered rows.

On the other hand, Sekine also discloses an image sensor. More specifically, Sekine teaches that a honeycomb image sensor (figure 1C) is notoriously well known in the art. The honeycomb image sensor is arranged wherein the pixels are disposed in odd numbered column and odd numbers rows, and even numbered columns and even numbered rows, as also shown in figure 1C.

As stated in column 2 (lines 34 – 37) of Sekine, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a honeycomb image sensor, as taught by Sekine, in the image sensing apparatus and corresponding method of operating thereof, disclosed by Komiya et al., for the advantage of improving vertical resolutions.

7. As for **Claim 2**, Komiya et al. disclose, as shown in figure 3A, a storage device (also memory card 23) for storing the data representing the characteristics ("focal length"); wherein said second recording controller records the data representing the characteristics on the storage device (23), said data being read out of said storage device (see column 6, lines 13 – 23).

8. As for **Claims 5 and 8**, Komiya et al. disclose, as stated in column 5 (lines 43 – 67), wherein the second recording controller (card writer 22) further records data representing circuit characteristics based on the use of the image sensing unit (17) on the recording medium (23).

More specifically, Komiya et al. teach setting different JPEG compression rate for each compression mode and further teach, recording in the memory card (23), the compression mode, white balance, and shutter speed during image capture, all of which correspond to circuit characteristics.

9. As for **Claims 10 – 15**, Komiya et al. teach that the lens characteristics may comprise "lens position" and "focal length", which are later used for image processing including correction of lens aberrations (see column 6, lines 13 – 23). The "focal length" of a lens is determined by the index of refraction, the radii of curvature of the lens' surfaces, and the medium in which the lens resides; hence, the "focal length" corresponds to the "structure of lenses". Komiya teaches storing information concerning the on-chip-lens curvature, index of refraction and position, and inner-lens curvature. Komiya further teaches, in column 6 (lines 43 – 47), storing information concerning distortion aberration.

Therefore, Komiya teaches wherein the structure of lenses is: the on-chip-lens curvature, index of refraction and position, inner-lens curvature, and aberration. Furthermore, the Examiner notes all lenses inherently have distortion and chromatic magnification aberrations.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Ngoc Yen Vu can be reached on 571.272.7320. The fax phone number for the organization where this application or proceeding is assigned is 571.273.3000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
January 31, 2006

NGOC-YEN VU
PRIMARY EXAMINER

Attachment: Book Excerpt